|  |  |
| --- | --- |
| **TERM** | **CHARACTERISTICS** |
| Biosphere | * Is the region of the earth that encompasses all living things * “bio” means life. * The biosphere includes the other ‘spheres’. * Humans impact the sustainability of the biosphere in many ways. The growing human population affects other living things by using up natural resources. This has a flow-on effect by affecting life-support systems of other living things which in turns affects the life-support systems that support us. Such activities that use natural resources are: land clearing, grazing, water diversion, mineral extraction, fuel consumption. All these types of activities lead to problems such as habitat destruction, deforestation, and soil degradation, loss of biotic diversity, climatic changes, pollution, and desertification. |
| Lithosphere | * The lithosphere is the solid, rocky crust and the upper mantle, which covers the entire planet. * “litho” means stone. * The lithosphere is broken into giant plates that fit around the globe like puzzle pieces (tectonic plates). * Humans impact the sustainability of the lithosphere by way of mining. Such resources as gold, iron, copper, coal, and oil are mined from the lithosphere for the use by humans in many applications for everyday living. Mining however produces air pollution, solid waste, and poisonous water. It also uses consumes a considerable amount of other resources such as water and electricity. |
| Hydrosphere | * Hydrosphere is the liquid water component of the Earth. It includes the oceans, seas, lakes, ponds, rivers and streams. * “hydro” means water. * The hydrosphere covers about 70% of the Earth’s surface. * Humans impact the sustainability of the hydrosphere through a number of ways including: industrial waste, seepage of fertilizers etc., inadvertent and deliberate discharge of petroleum and wrongful sewage disposal into our water ways. These can cause a drop in water quality and cause a stopping or slowing in biodiversity of a certain ecosystem. |
| Atmosphere | * Is the blanket of air surrounding the Earth. * “atmos” means vapour * The atmosphere absorbs the energy from the sun, recycles water and other chemicals and works with the electrical and magnetic forces to provide a moderate climate. It protects us from high energy radiation and the frigid vacuum of space. * Humans impact the sustainability of the atmosphere by: burning coal, oil and natural gases, deforestation, and agricultural and industrial practices. These practices all contribute to the alteration of the composition of the atmosphere and to climate change. Affecting the important roles in which the atmosphere operates such as absorbing and reflecting energy. |